

S/N: 10/706,760

Filed: November 12, 2003

AMENDMENT AND RESPONSE

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This application is a continuation-in-part of U.S. Patent Application Serial No. 10/113,193, filed April 1, 2002, ~~currently co-pending~~ now abandoned.

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Kindly make the amendment shown in the paragraphs starting at page 2, lines 11-31 and page 3, line 1- 15.

Specification

There have been several prior suggested adjustable power IOLs, none of which have been commercially introduced. For example, U.S. Patent Nos. 5,222,981 (Werblin) and 5,358,520 (Patel), the entire contents of which being incorporated herein by reference, suggest the use of a second or even a third optic that may be implanted and attached to a previously implanted primary optic so as to adjust the overall optic power of the multi-lens system. U.S. Patent Nos. 5,628,798 and 5,800,533 (Eggleston, et al.), the entire contents of which being incorporated herein by reference, disclose a threadedly adjustable IOL wherein the location of the optic along the visual axis may be adjusted. U.S. Patent No. 4,575,373 (Johnson), the entire contents of which being incorporated herein by reference, discloses an IOL having an optic and an outer ring and connections between the optic and the outer ring made from a heat-shrinkable plastic. The connections are heated with a laser to adjust the power of the IOL. U.S. Patent Nos. 4,919,151 and 5,026,783 (Grubbs, et al.), the entire contents of which being incorporated herein by reference, disclose a lens made from a polymer that swells or otherwise changes shape. The lens is implanted or injected into the capsule bag and selectively polymerized so as to adjust the power of the optic. U.S. Patent No. 5,571,177 (Deacon, et al.), the entire contents of which being incorporated herein by reference, discloses an IOL having haptics with frangible stiffeners. Once implanted in an eye, the stiffeners are selectively cut or heated above their t_g by laser radiation, causing the stiffness of the haptic to change and adjusting the location of the lens within the capsule bag. The multi-lens designs and the threadedly adjustable designs all require a secondary surgical procedure in order to make any necessary adjustment to the lens. The adjustment of the lens power by *in-situ* polymerization of the lens material requires the implantation of a lens made from an unpolymerized, ~~possible~~ possibly toxic material.

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Another lens, disclosed in U.S. Patent No. 5,549,668 (O'Donnell, Jr.) discloses an optic ~~have~~ having an anterior layer and a posterior layer separated by an intermediate layer made from an expansive hydrogen or collagen material. By varying the hydration of the intermediate layer, the inventor claims to be able to make changes in the optical power of the lens. However, the intermediate layer extends across the entire diameter of the lens, including the optical zone. When the hydration state of the intermediate layer is ~~changes~~ changed, the refractive index is also changed. Therefore, varying the hydration of the intermediate layer will affect the overall optical power of the lens. In addition, the "columns" illustrated in this patent, used to allow the laser light to reach the intermediate layer without damaging the anterior or posterior layers, can introduce unwanted photic phenomena, such as glare, light scattering or starburst images. Irradiating these columns can also induce non-uniform meridial stresses that distort the lens and thereby create optical aberrations.